

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A transmitting communication equipment comprising:
an aggregator for aggregating information ~~based on user service requirements~~
and for transmitting the aggregated information as an aggregated packet to a receiving communication equipment, said receiving equipment having a de-aggregator for de-aggregating the aggregated packet,

wherein the information comprises a plurality of time-delay intolerant data packets scheduled for transmission at a designated rate, said designated rate being based on at least one time delay constraint of the data packets,

wherein a size of an aggregation factor, which is the number of said plurality of data packets in the aggregated packet is packet, is based at least in part on at least one user service requirement and a negotiation between the transmitting communication equipment and the receiving communication equipment, and

wherein the aggregated packet is transmitted by the transmitting equipment to the receiving equipment at a rate different than the designated rate of the data packets.

2. (Currently amended) The transmitting communication equipment of claim 1 wherein the at least one user service requirement comprises size of the aggregated packet is further based at least in part on channel conditions of a communication channel used for transmitting the aggregated packet between the transmitting communication equipment and the receiving communication equipment.

3. (Currently amended) The transmitting communication equipment of claim 2 wherein:

the channel conditions are monitored on an ongoing basis during communications between the transmitting communication equipment and the receiving communication equipment; and

~~a size~~ an aggregation factor of each of a plurality of aggregated packets transmitted from the transmitting communication equipment to the receiving communication equipment is based at least in part on the channel conditions at the time when the aggregated ~~packets are~~ packet is generated.

4. (Currently amended) The transmitting communication equipment of ~~claim 1~~ claim 2 wherein:

the aggregator has an input for coupling to a first buffer; and

the first buffer receives ~~information~~ the data packets at the designated rate from a terminal equipment ~~from which said first buffer retrieves the information~~ if the transmitting communication equipment operates in a terminal mode, ~~mode~~ and the first buffer receives ~~information~~ the data packets from equipment other than the terminal equipment, at a rate other than the designated rate, if the transmitting communication equipment operates in a relay mode.

5-6. (Canceled)

7. (Currently amended) The transmitting communication equipment of claim 4 ~~where the user service requirements are related to quality of service provided to users of a communication system within which the equipment is being used.~~ 2 wherein the user service requirements on which the aggregation factor is based further include (i) a data rate capability of a communication system within which the equipment is being used, (ii) a current loading level of the system and/or channel, and (iii) a designated quality of service level of the receiving communication equipment in the system.

8. (Currently amended) The transmitting communication equipment of claim 4 ~~where the information comprises real time information.~~ 2 wherein all the time-delay intolerant data packets in the aggregated data packet are designated for reception and use by a single end-user terminal.

9. (Currently amended) The transmitting communication equipment of ~~claim 1~~ claim 2 wherein the aggregator performs channel coding and modulation on the aggregated packet. ~~information.~~

10-22. (Canceled)

23. (New) A transmitting communication equipment comprising:
a signal encoder for generating a stream of data packets, said data packets comprising time-delay intolerant information and being scheduled for transmission at a designated rate, said designated rate being based on at least one time delay constraint of the data packets;

an aggregator for aggregating a plurality of said data packets into an aggregated data packet, wherein the number of data packets in said plurality is based on an aggregation factor; and

a transmitter for transmitting the aggregated data packet over a communication channel, said aggregated packet being transmitted at a rate other than the designated rate;

wherein the aggregation factor is determined based on (i) negotiation information received by the transmitting communication equipment and (ii) channel conditions of the communication channel over which the aggregated packet is to be transmitted.

24. (New) The transmitting communication equipment of claim 23, wherein the aggregation factor is further based on a plurality of user service requirements, said user service requirements comprising: (i) a data rate capability of a communication system within which the equipment is used, (ii) a current loading level of the communication system and/or communication channel, and (iii) a designated service level of a receiving communication equipment in the communication system.

25. (New) The transmitting communication equipment of claim 23, wherein:
the signal encoder and aggregator operate in an application layer of a communication system within which the equipment is used, said aggregated data packet being generated in the application layer; and

the aggregated data packet is divided into a plurality of transmission packets at a transport layer of the communication system.

26. (New) The transmitting communication equipment of claim 23, wherein the signal encoder is a vocoder, and the data packets are voice data packets generated by the vocoder at the designated rate.

27. (New) A method of transmitting information, said method comprising the steps of:

aggregating a plurality of data packets into an aggregated data packet, said data packets comprising time-delay intolerant information and being scheduled for periodic transmission at a designated rate, wherein the number of data packets in said plurality is based on an aggregation factor; and

transmitting the aggregated data packet over a communication channel, said aggregated packet being transmitted at a rate other than the designated rate;

wherein the aggregation factor is determined based on (i) negotiation information received by a transmitting communication equipment and (ii) channel conditions of the communication channel over which the aggregated packet is transmitted.

28. (New) The method of claim 27 wherein the aggregation factor is further based on a plurality of user service requirements, said user service requirements comprising: (i) a data rate capability of a communication system, (ii) a current loading level of the communication system and/or communication channel, and (iii) a designated service level of the receiving communication equipment in the communication system.

29. (New) The method of claim 28 wherein:

the plurality of data packets are generated and aggregated in an application layer of the communication system; and

the aggregated data packet is divided into a plurality of transmission packets at a transport layer of the communication system.